

ABSTRACT OF THE DISCLOSURE

5 **TOUCH SENSITIVE DEVICE EMPLOYING BENDING WAVE VIBRATION SENSING AND EXCITATION TRANSDUCERS**

 A touch sensitive apparatus includes a touch plate to which several pickup sensors
and at least one excitation transducer are coupled. Each of the sensors is configured to sense
10 bending waves in the touch plate, and the excitation transducer is configured to induce
bending waves in the touch plate. The apparatus may further include active buffer circuits,
wherein each of the active buffer circuits is coupled to one of the sensors. A controller is
coupled to the sensors via the active buffer circuits and to the excitation transducer via a non-
actively buffered connection. The controller is configured to compute a location of a contact
15 on the touch plate responsive to sense signals received from the sensors. The apparatus may
be used to perform a variety of calibrations, including touch plate and sensor calibrations.
Changes in touch sensing apparatus calibration and performance may be detected and tracked
over time.